

1. (Currently Amended) A method of interactive television wherein a video signal is generated based on real time user perception of video images comprising the steps of:

- forming ~~the~~ a video signal of ~~the~~ an entire frame of a video display, and generating a video image or video signals of sectors of said video image ~~sectors~~ the with ~~one~~ substantially equal or different quality levels, ~~in the~~ a video signal formation ~~facility~~ component;
- converting ~~at least one~~ the video signal at least one time in ~~one~~ a video signal conversion ~~facility~~ component into a series of video signals of the sectors of the video image ~~sectors~~ and/or
- converting the level of quality of the video image sectors, and/or
- changing internal boundaries of the video image,
- transmitting all said video signals via data channels, at least, to one conversion ~~facility~~ component and, to at least, ~~to~~ one information display ~~facility~~ component,
- forming a video image on ~~the~~ a screen of the information display ~~component~~ facility, said video image being which is perceived, at least, by one user,
- determining resolution characteristics, ~~at least,~~ by employing at least one sensor ~~at least for in operative communication with~~ one eye of the user with respect to the video image formed by the information display ~~component~~ facility and perceived at an eye resolution by said one eye of said user, and
- employing data from said sensor to ~~forming~~ dynamically determine signals coding characteristics, ~~at least,~~ based on said

data from said sensor for as to said eye resolution of at least
said one eye of the user,

- transmitting ~~the above~~ signals having said signal coding characteristics to, at least ~~to~~ one computing component facility;
- generating an interrogation signals with said computing component, taking into account ~~the function of~~ the eye resolution, ~~that communicated in the~~ coding characteristics, said interrogation signal containing information on the boundaries, at least, in one sector of the video image and/or the quality levels, at least, in one sector of the video image of the eye resolution of at least ~~for~~ said one eye, of said at least, one user and, at least

based on the eye resolution ascertained from, ~~one~~ a group of users' eyes;

- transmitting said interrogation signals to at least ~~to~~ two ~~facilities for the given~~ video signal formation components communicating with a facility, video signal conversion ~~facilities~~ components and information displays ~~facilities~~ components, in which the interrogation signal is taken into account with a respective concurrent adjustment in
- forming of said video signals,
- converting of said video signals and
- forming of said video image.

2. (Currently Amended) The method of claim 1, according to which the computing ~~facility~~ component generates an interrogation signal for a group of users, which differs by the fact, that is a summarizing interrogation signals for the users and/or groups of users taking part of the above group.

3. (Currently Amended) The method of claim 2, which differs by the fact, that summarizing interrogation signals coding external boundaries of video image sectors of ~~the~~ a similar quality level for each level of video image quality coded in a series of interrogation signals for a group of users; in this connection, for each interrogation signal the respective external boundary of the video image sector of each quality level comprises external boundaries of all video image sectors with indicated quality level.

4. (Original) The method of claim 2, which differs by the fact, that summarizing interrogation signals for the indicated users' group coding the quality level of video image for each sector of video image coded in a series of interrogation signals for a group of users; in this connection, the quality level of each sector of interrogation signal video image for a group of users is taken as having the highest quality level for the corresponding sector of video image of each interrogation signal of users or a group of users forming a part of the given group.

5. (Currently Amended) The method of claim 1, or claim 2 or claim 3 or claim 4, which differs by the fact, that forming series of video signals of the entire video image of high and low quality level of video image in the ~~facility of~~ video signal formation component, changing boundaries of each sector of video image in the video signal conversion ~~facility~~ component except for the sector of video image of the highest quality level, such that the internal boundaries of the above sector correspond to the external boundaries of the video signal area with a higher quality level of video image with respect to the sector with variable boundaries.

6. (original) The method of claim 5, which differs by the fact, that converting a video signal of the entire video image into a series of video signals with quality level of the video image, with the lower quality level of the video image of the initial video signal.

7. (Currently Amended) The method of claim 5 ~~or claim 6~~, which differs by the fact, that transmitting the video signal of the lowest quality level of video image via the data channels of data transmission ~~facility~~ component to every ~~facility~~ of information display component directly or via the ~~facility~~ of video signal conversion component, associated with the relevant information display ~~facility~~ component.

8. (Currently Amended) The method of claim 5 ~~or 6, or 7~~, which differs by the fact, that forming the video signal of the entire video image or sectors of the video image of low quality level in the video signal formation ~~facility~~ component, in this connection, identifying the value of the pixel of the video image of low quality level as the mean value of video signal pixels of high quality level of the video image, forming a part of the video image sector, restricted with boundaries of the above pixel.

9. (Currently Amended) The method of claims 5 or ~~6, or 7, or 8~~, which differs by the fact, that converting the video signal into the low quality video signal in the ~~facility~~ of video signal conversion component, in this connection, determining the pixel value of video signal of low quality video image, as the value of one of pixels of the video signal of high quality level of video image, formed a part of video image section restricted with boundaries of the above pixel.

10. (Currently Amended) The method of claim 5 ~~or 6, or 7, or 8, or 9~~, which differs by the fact, that forming a video signal of the first extended quality level in the ~~facility~~ of video signal formation component or in the ~~facility~~ of video signal conversion component respectively by the subtraction from the video signal of the first high quality level of the video signal of the basic quality level, whereas forming the video signal of the second and

the further extended quality levels by the subtraction from the video signal of the relevant high quality level of the video signal with the quality level reduced with respect to it respectively; in this connection, the lowest level of video signal quality is the basic level of video signal quality in the conversion ~~facility~~ component of video signals connected with the information display ~~facility~~ component for every video signal, summarizing video information of the relevant video signal and video information of all video signals with quality level lower than the stated quality level, except for an extended video signal corresponding to the highest quality level of video image within the limits between the external boundary of the above video signal and the external boundary of the video signal with high quality level with respect to the stated video signal; forming the video signal with a higher quality level by summing within the limits of the boundary of the assigned sector of video information of video signals of all quality levels.

11. (Currently Amended) The method of claim 10, which differs by the fact, that forming the video signal with the basic quality level in the ~~facility~~ of video signal formation component and is converted in the ~~facility~~ of conversion component into the standard video signal and is transmitted to the information display facilities of the users and/or a non-restricted group of users provided with standard information display facilities .

12.(Currently Amended) The method of claim 9, ~~or 10~~, which differs by the fact, that determining the pixel of the video signal of the extended quality level of video image in the ~~facility~~ of video signal formation component or in the ~~facility~~ of video signal conversion component by subtraction of high quality level pixel of video image;

forming video signal pixel with basic quality level in the ~~facility~~ of video signal conversion component or the information display ~~facility~~ component and video signal pixel of high quality level of the video image by way of summing the video signal pixel of the extended quality level and the video signal pixel of the quality basic level.

13.(Currently Amended) Method of any claims 6 ~~or 9 or 10~~, which differs by the fact, that determining the video signal pixel of basic quality level in the ~~facilities of~~ video signal formation component or video signal conversion component as equal to the video signal pixel of high quality level forming a part of video signal pixels of high quality level of video image sector, included into video image sector, restricted with boundaries of the above video signal pixel of the basic quality level; determining the other pixels by way of subtraction of video signal pixels with basic quality level from the pixels of high quality level, determining video signal pixel of high quality level in the facilities of video signal conversion or information display as corresponding to video signal pixel of the basic level; forming the other video signal pixels of high quality

level included in the video image sector restricted with the boundaries of the pixel of the relevant video signal of the basic quality level by way of summing the relevant video signal pixels of the extended quality level and the relevant video signal pixel of the basic quality level.

14. (Currently Amended) The method any of claims 1 ~~— 13,~~ which differs by the fact, that scanning the screen with an electronic ray in the data display facility component using the CRT, transmitting video signals coding boundaries of the sector of extended video image to the electron gun to the facility component of sector output control at the entry of the electronic ray into the sector area with the other quality level, to the control facility component of the image sector output with control signal delivery to the change of the size of the luminous spot on the CRT screen to the size corresponding to the size of a pixel of video image of video image sector.

15. (Currently Amended) The method of claim 6 ~~or 10,~~ which differs by the fact, that recording converted video signals of low or basic quality level previously on video signal medium, displaying the video signal of low or basic quality level synchronously with produced video signals of high or extended quality level accordingly.

16. (New) The method of claim 6 which differs by the fact, that transmitting the video signal of the lowest quality level of video image via the data channels of data transmission component to every information display component directly or via the video signal conversion component, associated with the relevant information display component.

17. (new) The method of claim **6**, which differs by the fact, that forming the video signal of the entire video image or sectors of the video image of low quality level in the video signal formation component in this connection, identifying the value of the pixel of the video image of low quality level as the mean value of video signal pixels of high quality level of the video image, forming a part of the video image sector, restricted with boundaries of the above pixel.

18. (New) The method of claim **7**, which differs by the fact, that forming the video signal of the entire video image or sectors of the video image of low quality level in the video signal formation component, in this connection, identifying the value of the pixel of the video image of low quality level as the mean value of video signal pixels of high quality level of the video image, forming a part of the video image sector, restricted with boundaries of the above pixel.

19. (New) The method of claim 10, which differs by the fact, that determining the pixel of the video signal of the extended quality level of video image in the video signal formation component or in the video signal conversion component by subtraction of high quality level pixel of video image;

forming video signal pixel with basic quality level in the of video signal conversion component or the information display component and video signal pixel of high quality level of the video image by way of summing the video signal pixel of the extended quality level and the video signal pixel of the quality basic level.

20. (New) Method of any claims 10 which differs by the fact, that determining the video signal of basic quality level in the video signal formation component or video signal conversion component as equal to the video signal pixel of high quality level forming a part of video signal pixels of high quality level of video image sector, included into video image sector, restricted with boundaries of the above video signal pixel of the basic quality level; determining the other pixels by way of subtraction of video signal pixels with basic quality level from the pixels of high quality level, determining video signal pixel of high quality level in the facilities of video signal conversion component or information display component as corresponding to video signal pixel of the basic level; forming the other video signal pixels of high quality level included in the video image sector restricted with the boundaries of the pixel of the relevant video signal of the basic quality level by way of

summing the relevant video signal pixels of the extended quality level and the relevant video signal pixel of the basic quality level.

21.(New) The method of claim 10 which differs by the fact, that recording converted video signals of low or basic quality level previously on video signal medium, displaying the video signal of low or basic quality level synchronously with produced video signals of high or extended quality level accordingly.